Generalized Geometric Cubic Splines

Sarfraz, M.;Dept. of Inf.Comput. Sci., King Fahd Univ. of Pet.Miner., Dhahran;
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King Fahd University of Petroleum & Minerals

http://www.kfupm.edu.sa

Summary

A constructive approach has been adopted to build interpolatory and freeform cubic spline curves with a more general continuity than -continuity. This method provides not only a large variety of very interesting shape controls like biased, point and interval tensions but, as a special case, also recovers a number of spline methods like -spline of G.M. Nielson (1974), -splines, -splines of W. Boehm (1995) and weighted -splines. A discussion, for the conversion of complex continuity constraints into simple ones, has also been made for the practical implementation point of view